The Discourse about Modelling: Some Observations from the Outside

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Tessa Gengnagel [*]

Abstract: *»Einige außenperspektivische Anmerkungen zum Modellierungsdiskurs«.* This article presents some observations about the modelling discourse in the Digital Humanities from the perspective of an early stage researcher. It touches briefly on issues of interdisciplinarity and disciplinary discontinuity. Specifically, it questions the shared basis of the discourse in terms of the terminology that is used and the research literature that is commonly drawn upon. By way of example, the article calls attention to the seemingly forgotten and in any case neglected literature concerned with the conceptualization of models and modelling in science and the humanities that was produced by cyberneticists and philosophers of science in the GDR and the USSR, especially in the 1960s and 1970s. It may be argued that in order to advance the discourse about modelling in the Digital Humanities, the discourse about modelling in the humanities would have to be unearthed and considered first or at least as well, particularly where it already crossed paths with disciplines adjacent to computing.

Keywords: Interdisciplinarity, digital humanities, modelling.

1. Introduction

This article will not be about modelling. It will be about the discourse about modelling, as embodied in the workshop that spawned this HSR Supplement. I use "discourse" in a general sense of "conversation" here and not to evoke Foucault.

Since this contribution calls for an impression of my personal observation of the event, three qualifications need to be made: my interest in the topic parallels the work on my yet-to-be-finished PhD thesis, my involvement in the field as such is fairly recent – from a historical point of view – and my participation in the event was passive in nature. This will therefore amount to a short evaluation from the outside perspective of an early stage researcher.

Having said that, I want to focus on three issues:

1) Interdisciplinarity

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2) History
3) Consequences

2. Interdisciplinarity

The Digital Humanities are, *per definitionem*, an interdisciplinary field of study. This means that the practitioners draw their scholarly inspiration from varying backgrounds. One of the questions that needs to be asked, then, is how the Digital Humanities arrive at solutions that genuinely fit an inquiry *specific* to the Digital Humanities. The process required for this seems to be one of synergy and therein lies the importance of a workshop such as the one under review here.

Interdisciplinarity poses a chance and a problem. It offers a wide breadth of methodological and theoretical underpinnings while at the same time running the risk of drifting around aimlessly, with no one to take the helm. Or, as Gunnar Olsson put it in the closing discussion: "On the high seas there are no maps because there are no fix points."

This introduces an important aspect of navigational difficulty. The question is not just who guides. The question is also what to use as guidance.

I reference the metaphor of the exploring seafarer in this context because it was used during the workshop, building on Willard McCarty's introduction of the topic into the Digital Humanities discourse with his essay "Tree, Turf, Centre, Archipelago – or Wild Acre? Metaphors and Stories for Humanities Computing" (McCarty 2006). The exercises employed during the workshop first asked the participants to position themselves on an imaginary ship, then what direction their compass would be pointing, and later whether to explore an island or sail to new destinations. Thus, the approach taken to the process of synergy was one of individual introspection but, more importantly, collective sourcing.

Much is made of the collaborative nature of the Digital Humanities in contrast to the traditional humanities in which a single scholar may carry out his or her work in the proverbial quiet little chamber (from the German expression "im stillen Kämmerlein"). It might be a side effect of the practice-orientation of the Digital Humanities or one of its enabling foundations. Either way, what struck me during the workshop was that the benefits of this reality might have their limits when it comes to epistemological considerations. Ideas need to be shared in a communal space; especially in academia, where the torch continually passes from one hand to another. But there also needs to be a common ground with a common terminology. I feel like this is the stage that we are at right now: trying to ascertain a shared language *and* a shared understanding of a concept.

As Nelson Goodman wrote in his *Languages of Art*:

> Few terms are used in popular and scientific discourse more promiscuously than 'model'. A model is something to be admired or emulated, a pattern, a case in point, a type, a prototype, a specimen, a mock-up, a mathematical de-

> scription–almost anything from a naked blonde to a quadratic equation–and may bear to what it models almost any relation of symbolization. (Goodman 1976, 171)

He finds the use of the term so ubiquitous and its meaning so vague that he suggests that it should be "dispensed with [...] in favour of less ambiguous and more informative terms." (Goodman 1976, 172)

Trying to tackle the issue from a semiotic point of view might not be particularly enlightening then. In the Digital Humanities, the need for discussion arises from the computational use of the terms "model" and "modelling", as well as the narrow focus on "data modelling". Part of the *raison d'être* for the workshop and the project behind it is, I surmise, the recognition that this scope needs to be widened if there is to be progress towards a better understanding of what *scientific* models are and what they mean in the context of the humanities. This is still tied to the question of computability: in a data model, there is always a conceptual model implied and a data model can be improved when the fundamental step of *conceptually* modelling objects of study from the humanities is explicitly examined.

While there were experts from the fields of Computer Science and Mathematics present at the workshop, juxtaposed with representatives from fields such as Geography, Semiotic Literary Studies, Psychology and Archaeology, I wish that this point had been made clearer. Why are the Digital Humanities interested in modelling beyond the question of data modelling and what are they specifically interested in? Conceptual modelling would be my answer.

For this, it might have been helpful to take a closer look at conceptual models in the humanities, rather than discussing topics such as iconicity, where the debate seemed to oscillate between the visual representation of models (as in the form of graphs) – and why this is necessary for our comprehension of the world – and our visual comprehension of the world and why that is necessary to formulate models. In one of the sessions Rens Bod rightfully pointed out that examples of models from the humanities were strangely missing from many presentations, even though they exist (e.g. in the case of stemmatology).

Perhaps the question is not so much how we model but what we model. The former follows from the latter.

3. History

I will keep this point short. Still, I wanted to draw attention to the historical perspective that is often missing from the discourse. Rens Bod provided a very valuable look at the history of the humanities (Bod 2018, in this issue). One aspect that I would like to emphasize, however, is that there appears to be a wealth of epistemological writings about "models" as a concept in the Philosophy of Science that has yet to be fully unearthed. In my research, I found a number of books and articles that I deem highly relevant to the current debate

in the Digital Humanities. They were written in the 1960s and 1970s by cyberneticists and philosophers in the GDR and USSR (e.g. Stachowiak 1972, 1973; Štoff 1966). I understand, of course, why they were not read or reviewed on the other side of the Iron Curtain but at least German researchers will still come across them very easily nowadays. They include attempts to classify models across science and the humanities. These classification attempts seem almost more advanced than anything under discussion today. That they were developed in the field of cybernetics which is not *en vogue* any longer but shares some significant overlap with the Digital Humanities as a transdisciplinary study concerned with the workings of both man and machine is probably not a coincidence.

Similarly, there are excellent contributions to the topic of models in the humanities out there, such as from the hermeneuticist and historian Gordon Leff, who wrote about *Models inherent in History* around the same time (Leff 1972). While there is certainly more literature available on "models in science", including dedicated encyclopedia articles (e.g. Frigg and Hartmann 2017), that should not obscure the view. If there is something quite specifically relevant to the issue at hand out there, it should take precedence over oft-quoted but marginally related classics and finding it should be the first task of anyone investigating the topic from a particular angle – in this case, that of the Digital Humanities.

4. Consequences

Which brings me back to what I stated earlier. How far does a collective effort to understand the topic at hand carry towards synergy? I think it is an important step in sampling the interdisciplinary status quo – however, only in respect to certain disciplines, given that the experience and the knowledge from a field like cybernetics will be absent (or present) based on the visibility of the discipline itself, not its value for the debate. This is why I am always in favor of featuring more historians. Of course, one would have to find one who specializes in this area first. That might be one of the biggest obstacles facing the Digital Humanities nowadays: The discontinuity of disciplinary tradition.

Secondly, the workshop was highly stimulating intellectually and proved, in my opinion, that the discourse needs not so much widening at this point but sharpening. Primarily in two directions: What types of models exist in the humanities; why and how are they used (even if implicitly)? And how is this relevant for the Digital Humanities, theoretically and practically?

Answering these questions requires a single line of argumentation, one that I am eager to see established as a result of the workshop.

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